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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,391	06/13/2001	Paul Wolcott Harrison	RM301e	8565

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EXAMINER

EVANS, GEOFFREY S

ART UNIT	PAPER NUMBER
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1725

9

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,391

Applicant(s)

HARRISON, PAUL WOLLCOTT

Examiner

Geoffrey S Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-109 is/are pending in the application.
- 4a) Of the above claim(s) 4-9, 19, 27-65, 86-95 and 97-109 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 66-84 is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-18 and 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 5, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The renumbering of the claims due to the original claims having two claims numbered as "19" is approved under 37 CFR 126.
2. Claims 4-9, 19, 27-65, 86-95 and 97-109 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 13, 25, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Adams in U.S. Patent No. 5,422,146. Adams discloses electrostatic coating (e.g. see column 3, lines 20-25) a marking layer and that the wavelength of the laser is selected to be absorbed by the marking layer (see column 2, lines 37-39, and column 3, lines 4-7). Regarding claim 13, Adams discloses that the substrate can be a ceramic (see column 4, line 37). Regarding claim 25, Adams discloses that the source of radiant energy can be a laser (see column 2, line 53).
5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (146) in view of Balliet, Jr. et al. in U.S. Patent No. 5,359,176. Balliet, Jr. teaches using a laminar flow to protect the optical processing assembly associated with the laser from particles and debris. It would have been obvious to adapt Adams in view of Balliet, Jr. et al. to provide this to protect the laser and associated optics from particles and debris caused during the marking process.

7. Claims 10-12,13,14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams (146) in view of Condit et al. in U.S. Patent No. 5,919,853. Condit et al. teaches marking workpieces using a powder with a composition including a colorant (titanium dioxide) and carbon black (see column 5, lines 18-30 in which a toner is disclosed as being usable as a component of the powder used for laser marking) that absorbs energy from a Nd:YAG laser (see the last four lines of column 4). It would have been obvious to adapt Adams in view of Condit et al. to provide this to better absorb the infrared energy beam from the laser. Condit et al. further teaches that the substrate may be made out of metal. It would have been obvious to adapt Adams in view of Condit to provide this to mark metal.

8. Claims 13,15,16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Boden et al. in German Democratic Republic Patent Document No. 201,136 (published 6 July 1983). Boden teaches using a laser to fix a coating (that has previously been applied by electrostatic spraying) to a substrate made of glass or ceramic) and that the coating can be made of a glass frit or metal

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oxides. It would have been obvious to adapt Adams in view of Boden et al. to provide this to mark glass or ceramic.

9. Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boden et al. in German Democratic Republic Patent Document No. 201,136 in view of Adams in U.S. Patent No. 5,422,146. Boden et al. meets all of the limitations of claims 1 and 16 except Boden et al. does not disclose using a radiation beam having a wavelength selected to excite the marking layer (frit). Adams teaches using a laser with wavelength adjusted to the absorption wavelength of the marking layer (see column 2, lines 37-40). It would have been obvious to adapt Boden et al. in view of Adams to provide this to more efficiently bond the marking layer to the substrate.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boden et al. in view of Adams as applied to claim 16 above, and further in view of Sakoske in U.S. Patent No. 5,783,507. Sakoske teaches using a glass frit layer including a silicon oxide as a low cost frit and good consistency (see column 2, lines 58-61). It would have been obvious to adapt Boden et al. in view of Adams and Sakoske to mark the substrate with a relatively low cost frit having good consistency.

11. Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boden et al. in view of Adams as applied to claim 1 above, and further in view of Schumacher in GB 2,169,282. Schumacher teaches using a marking material comprising glass frit and a metal compound (titanium dioxide; see lines 109-118). It would have been obvious to adapt Boden et al. in view of Adams and Schumacher to provide this to create a colored enamel mark on the surface.

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12. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Carlblom et al. in U.S. Patent No. 5,698,269. Carlblom et al. teaches direct electrostatic coating of a substrate. It would have been obvious to adapt Adams in view of Carlblom et al. to provide this to more accurately deposit a coating on the substrate.

13. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Luderer et al. in U.S. Patent No. 3,691,991. Luderer et al. teaches depositing the material by electrostatic coating in the form of dry powder or liquid droplets. It would have been obvious to adapt Adams in view of Luderer et al. to provide this depending upon the material being used for marking.

14. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams in view of Zambounis et al. in U.S. Patent No. 5,840,449. Zambounis et al. teaches it is preferable to only coat a portion of a surface (see column 17, lines 24-39) for marking. It would have been obvious to adapt Adams in view of Zambounis et al. to electrostatically apply the marking material in the form of a mark to avoid using excess marking material.

15. Claims 85 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boden et al. in German Democratic Republic Patent Document No. 201,136 in view of Ohachi et al. in Japan Patent No. 5-92,657. Boden et al. discloses using a layer of glass frit as a marking material that has been electrostatically coated on to a substrate made of glass or ceramic as the marking material but Boden et al. does not disclose using an energy absorbing enhancer in the marking material. Ohachi et al. teaches using carbon black as an energy absorbing material for light from a Nd:YAG

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laser. It would have been obvious to adapt Boden et al. in view of Ohachi et al. to better make a sharp mark.

16. Claims 66-84 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (703)-308-1653. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703)-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9310 for regular communications and (703)-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.



Geoffrey S Evans
Primary Examiner
Art Unit 1725

GSE
May 19, 2003